

REMARKS

Applicant has carefully reviewed the Office Action of February 9, 2005, and offers the following remarks to accompany the above amendments.

Claims 12, 21, and 25 are amended to clarify article usage before elements within the claims. No new matter is added.

Claims 3, 12, and 21 were rejected under 35 U.S.C. § 112, second paragraph, for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Applicant respectfully traverses. The Patent Office asserts that because the specification describes “minimizing the variance” and the claims recite “reduce the variance”, that the claims do not reflect this aspect of the invention. Applicant respectfully submits that the claims as filed form part of the specification. 35 U.S.C. § 112. Thus, subject matter that was present in the claims as originally filed is regarded as part of Applicant’s invention. Furthermore, “minimizing” is a form of “reducing” and thus, the subject matter of the claims is supported in the detailed description part of the specification. To this extent, the claims are fully supported by the specification as filed, and particularly point out and distinctly claim the subject matter which Applicant regards as the invention. If Applicant has misunderstood the nature of the rejection, Applicant requests clarification thereof so that Applicant may respond as appropriate.

Claims 1, 8, 10, 17, 19, 26, and 28 were rejected under 35 U.S.C. § 103 as being unpatentable over Bahl et al. (hereinafter “Bahl”) in view of Ketcham. Applicant respectfully traverses. For the Patent Office to establish *prima facie* obviousness, the Patent Office must show where each and every claim element is located in the combination of references. MPEP § 2143.03.

The combination of Bahl and Ketcham does not teach that the prioritization factor is controlled “in proportion to a required data rate. . . .” as recited in the claims. The Patent Office asserts that Bahl, col. 2, lines 50-63 teaches the element. Applicant respectfully traverses this assertion. Bahl, col. 2, lines 50-63 state in full:

The method includes adaptively determining a weight for each flow, based on a predetermined criterion, and allocating a portion of bandwidth to each flow proportionally to the weight for the flow.

For example, in one embodiment, the predetermined criterion takes into account an input rate of data packets for each flow. Thus, flows that are receiving more data packets for transmission over the link over a period of time are accorded higher weights. As another example, in one embodiment, the predetermined criterion takes into account the queue size for each flow. Thus, flows that have a greater backlog of data packets for transmission over the link are accorded higher weights.

While the cited passage does indicate that the criterion takes into account an input rate and queue size, neither of these two factors is the same as the recited "required data rate". The input rate could be very high, but the data in the input may have a low priority rate or a high priority rate. In either event, there is no teaching or suggestion that the input data rate has any sort of "required data rate". Likewise, the queue size can be large, but the size of the queue bears no relation to the required data rate associated with the data within the queue. To this extent, the cited passage does not teach or suggest that the prioritization factor is controlled in proportion to a required data rate, as recited in claims 1, 10, 19, and 28. The Patent Office has pointed to nothing in Ketcham that cures the deficiencies of Bahl. Since the references individually do not teach or suggest the recited claim element, the combination of references does not teach or suggest the claim elements. Since the combination of references does not teach or suggest the claim element, the Patent Office has not established obviousness. Since the Patent Office has not established obviousness, the claims are allowable.

Claims 8, 17, and 26 depend from allowable claims and are allowable at least for the same reasons. Applicant requests withdrawal of the § 103 rejection of claims 1, 8, 10, 17, 19, 26, and 28 at this time.

Claims 2, 11, and 20 were rejected under 35 U.S.C. § 103 as being unpatentable over Bahl in view of Ketcham, and further in view of Fawaz et al. (hereinafter "Fawaz"). Applicant respectfully traverses. The standard for establishing obviousness is set forth above.

Applicant traverses this rejection because the combination of references does not teach or suggest the prioritization factor is controlled "in proportion to a required data rate. . . ." as recited in the claims. As explained above, the combination of Bahl and Ketcham does not teach or suggest this element. The Patent Office has not pointed to anything in Fawaz that teaches or suggests this element. Since the references individually do not teach or suggest the element, the combination of references does not teach or suggest this element. Since the combination of

references does not teach or suggest the claim element, the Patent Office has not established obviousness. Since the Patent Office has not established obviousness, the claims are allowable.

Claims 3, 12, and 21 were rejected under 35 U.S.C. § 103 as being unpatentable over Bahl in view of Ketcham, and further in view of Liao et al. (hereinafter "Liao"). Applicant respectfully traverses. The standard for establishing obviousness is set forth above.

Applicant traverses this rejection because the combination of references does not teach or suggest the prioritization factor is controlled "in proportion to a required data rate. . . ." as recited in the claims. As explained above, the combination of Bahl and Ketcham does not teach or suggest this element. The Patent Office has not pointed to anything in Liao that teaches or suggests this element. Since the references individually do not teach or suggest the element, the combination of references does not teach or suggest this element. Since the combination of references does not teach or suggest the claim element, the Patent Office has not established obviousness. Since the Patent Office has not established obviousness, the claims are allowable.

Applicant further traverses the rejection because Liao does not teach the element for which it is cited. Specifically, claims 3, 12, and 21 recite that the variance in data rates is reduced. The Patent Office asserts Liao paragraph 0227 teaches this element. However, Liao paragraph 0227 says that it is desirable to adjust the allocations of bandwidth in such a way as to minimize the variance of the adjustment amounts. The adjustment amounts refer to adjustments to the bandwidth as discussed in paragraph 0226. Reducing variance in adjustments is not the same thing as reducing variance in data rates. One minimizes the amount of change in a bandwidth and one minimizes the difference in data rates. Reducing the amount of change in a bandwidth does not necessarily impact the difference in data rates. To this extent, Liao does not teach or suggest the element for which it is cited. The Patent Office admits that Bahl and Ketcham do not teach or suggest this element. Therefore, since the references individually do not teach or suggest the claim element, the combination of references does not teach or suggest this element. Since the combination of references does not teach or suggest the claim element, the Patent Office has not established obviousness. Since the Patent Office has not established obviousness, claims 3, 12 and 21 are allowable for this reason as well.

Claims 4-6, 13-15, and 22-24 were rejected under 35 U.S.C. § 103 as being unpatentable over Bahl in view of Ketcham, and further in view of Walton et al. (hereinafter "Walton"). Applicant respectfully traverses. The standard for establishing obviousness is set forth above.

Applicant traverses this rejection because the combination of references does not teach or suggest the prioritization factor is controlled "in proportion to a required data rate. . . ." as recited in the claims. As explained above, the combination of Bahl and Ketcham does not teach or suggest this element. The Patent Office has not pointed to anything in Walton that teaches or suggests this element. Since the references individually do not teach or suggest the element, the combination of references does not teach or suggest this element. Since the combination of references does not teach or suggest the claim element, the Patent Office has not established obviousness. Since the Patent Office has not established obviousness, the claims are allowable.

With respect to claims 5, 14, and 23, Walton does not show the claim element for which it is cited. In particular, these claims recite that the time-sensitive data is given higher priorities as the delay bounds approach. The Patent Office opines that this is shown by Walton, col. 23, lines 40-44. While Walton, col. 23, lines 40-44 does indicate that higher priority can be assigned to data that is time critical, there is no linkage between assigning it higher priority because of its time critical nature and giving higher priorities as the delay bounds approach. That is, while Walton may weigh more heavily data that is time sensitive, there is no indication that the weights increase as the delay bounds approach as recited in the claims. Thus, even if Walton's ranking scheme is mixed into Bahl and Ketcham's ranking scheme, the result is not Applicant's claimed invention. To this extent, Walton does not teach the element for which it is cited. Since the references individually do not teach or suggest the element, the combination of references does not teach or suggest this element. Since the combination of references does not teach or suggest the claim element, the Patent Office has not established obviousness. Since the Patent Office has not established obviousness, claims 5, 14 and 23 are allowable for this reason as well.

With respect to claims 6, 15, and 24, the Patent Office opines that Bahl, col. 2, lines 2-10 and 30-40 shows the recited "each time-sensitive unit of data is associated with a start time, which represents a threshold when the prioritization factor for the unit of data is adjusted based on the delay bound." Applicant respectfully traverses. While Bahl, col. 2, lines 2-10 discloses a back-off interval based on the start tag of the packet, the back-off interval is not adjusted based on a delay bound, but rather is a simple fixed weight (see Bahl, col. 2, lines 11-14). Likewise, the passage at col. 2, lines 30-40 does not describe a delay bound as claimed. While Bahl prioritizes large queues or flow that receive more data packets, these elements of Bahl are not the same thing as a delay bound. Since the reference does not teach the element for which it is cited,

and the Patent Office has not shown where the element can be found in the other references, the references individually do not teach or suggest the claim element. Since the references individually do not teach or suggest the element, the combination of references does not teach or suggest this element. Since the combination of references does not teach or suggest the claim element, the Patent Office has not established obviousness. Since the Patent Office has not established obviousness, claims 6, 15 and 24 are allowable for this reason as well.

Claims 7, 16, and 25 were rejected under 35 U.S.C. § 103 as being unpatentable over Bahl in view of Ketcham, in view of Walton, and further in view of Kilkki et al. (hereinafter "Kilkki"). Applicant respectfully traverses. The standard for obviousness is set forth above.

Claims 7, 16, and 25 depend from claims 5, 14, and 23 respectively. Claims 7, 16, and 25 are patentable at least for the same reasons that claims 5, 14, and 23 are patentable. That is, the addition of Kilkki does not cure the deficiencies of the underlying combinations of Bahl and Ketcham or of Bahl, Ketcham and Walton.

Applicant further traverses the rejection because Kilkki does not teach the element for which it is cited. That is, claims 7, 16, and 25 recite that the maximum percentage of the units of data that can be dropped prior to transmission is controlled. The Patent Office opines that the discussion of dropped packets in Kilkki at col. 7, lines 12-30 corresponds to this claim element. Applicant respectfully traverses this assertion. While the passage does indicate that packets can be dropped as a result of a need to reduce the number of packets that are allowed to be transmitted, there is no indication that the maximum percentage of packets that can be dropped is controlled. In fact, the cited passage implies that variable percentages of packets will be dropped so as to guarantee that users with higher established priorities have a greater chance of having their data packets transmitted. To this extent, Kilkki does not teach the element for which it is cited. Since Kilkki does not teach the element, and the Patent Office admits that the other references do not teach or suggest the element, the references individually do not teach or suggest the element. Since the references individually do not teach or suggest the element, the combination of references does not teach or suggest this element. Since the combination of references does not teach or suggest the claim element, the Patent Office has not established obviousness. Since the Patent Office has not established obviousness, claims 7, 16 and 25 are allowable for this reason as well.

Claims 9, 18, and 27 were rejected under 35 U.S.C. § 103 as being unpatentable over Bahl in view of Ketcham, in view of Fawaz, and further in view of Walton. Applicant respectfully traverses. The standard for patentability is set forth above.

As explained above, Bahl, Ketcham, Fawaz, and Walton individually do not teach or suggest the prioritization factor being controlled in proportion to a required data rate. Thus, in combination, these references do not teach or suggest the claim element. Since the references individually do not teach or suggest the element, the combination of references does not teach or suggest this element. Since the combination of references does not teach or suggest the claim element, the Patent Office has not established obviousness. Since the Patent Office has not established obviousness, the claims are allowable.

Furthermore, as explained above, the references individually do not teach the delay bound that is recited in claims 9, 18, and 27. Since the references individually do not teach or suggest the element, the combination of references does not teach or suggest this element. Since the combination of references does not teach or suggest the claim element, the Patent Office has not established obviousness. Since the Patent Office has not established obviousness, claims 9, 18 and 27 are allowable for this reason as well.

Applicant requests reconsideration of the rejections in light of the remarks presented herein. Applicant earnestly solicits claim allowance at the Examiner's earliest convenience.

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Respectfully submitted,

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